

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior listing of claims in the application.

1. (Cancelled)
2. (Previously Presented) The method of claim 24 wherein said metal overburden is selected from copper, tantalum, silicon dioxide, or mixtures thereof.
3. (Previously Presented) The method of claim 24 wherein said metal overburden is copper.
4. (Currently Amended) The slurry system method of ~~claim 24~~ claim 30 wherein said second slurry is abrasive free.
5. (Currently Amended) The slurry system method of ~~claim 24~~ claim 30 wherein said abrasive of said first slurry is selected from alumina, titania, zirconia, gennania, silica, ceria, or mixtures thereof.
6. (Currently Amended) The slurry system method of ~~claim 24~~ claim 30 ~~wherein said metal overburden~~ wherein said abrasive of said first slurry is silica.
7. (Currently Amended) The slurry system method of claim 4 wherein said abrasive of said first slurry is precipitated silica.
8. (Currently Amended) The slurry system method of ~~claim 24~~ claim 30 wherein said abrasive is present in an amount of from 0.1 to 30 percent by weight of said first slurry.
9. (Currently Amended) The slurry system method of claim 6 wherein said silica has an aggregate of primary particles, said primary particles having an average diameter of at least seven (7) nanometers, wherein said aggregate has an aggregate size of less than one (1) micron, and a hydroxyl content of at least seven (7) hydroxyl groups per nanometer squared.

10. (Currently Amended) The slurry system method of ~~claim 24~~ claim 30 wherein at least one of said first and second slurries further comprise an oxidant.

11. (Currently Amended) The slurry system method of claim 10 wherein said oxidant is selected from inorganic and organic per-compounds, bromic acid, chloric acid, nitrates, sulfates, or mixtures thereof.

12. (Currently Amended) The slurry system method of claim 10 wherein said oxidant is selected from hydrogen peroxide, urea-hydrogen peroxide, or mixtures thereof.

13. (Currently Amended) The slurry system method of ~~claim 24~~ claim 30 wherein at least one of said first and second slurries further comprise a material selected from complexing agent, anticorrosion agent, stopping compound, polyvalent cation sequestrant, thickener, or mixtures thereof.

14. (Currently Amended) The slurry system method of ~~claim 24~~ claim 30 wherein at least one of said first and second slurries further comprises an acid selected from picolinic acid, dipicolinic acid, quolinic acid, and mixtures thereof.

15. (Currently Amended) The slurry system method of ~~claim 24~~ claim 30 wherein at least one of said first and second slurries further comprises a polyvalent cation sequestrant and a anticorrosion agent.

16. (Currently Amended) The slurry system method of ~~claim 24~~ claim 30 wherein at least one of said first and second slurries further comprises a polyvalent cation sequestrant, a anticorrosion agent, and a thickener.

17.-20. (Cancelled)

21.-23. (Cancelled)

24. (Currently Amended) A method for polishing a microelectronic substrate to remove a metal overburden of the microelectronic substrate comprising the steps of:

(a) performing a first polish with a first slurry and polishing pad, wherein said first slurry comprises abrasive; and

(b) terminating the first polishing step of (a) prior to removal of the entire metal overburden leaving residual metal overburden on the substrate; and

(c) performing a second polish with a second slurry and polishing pad wherein said first slurry has higher concentration of said abrasive than said second slurry, and wherein the second polishing step is performed to substantially remove only the residual metal overburden of the substrate, wherein the step of substantially removing only the residual metal overburden of the substrate is defined by leaving a trace amount of the residual metal overburden that is less than 5% of the total metal overburden whereby steps a-c) remove more than 95% of the metal overburden.

25.-26. Cancelled.

27. (Currently Amended) The method of claim 24 ~~25~~ wherein said metal overburden is ~~selected from copper, tantalum and silicon dioxide.~~

28. (Cancelled)

29. (Original) The method of claim 24 further comprising the step of washing said substrate after completion of said first polish and prior to initiation of said second polish.

30. (New) A slurry system for removal of a copper metal overburden from a substrate a microelectronic substrate comprising:

(a) a first slurry which comprises abrasive and provides for partial removal of said copper metal from said microelectronic substrate, wherein the first slurry defines a first static etch rate of the copper metal overburden; and

(b) a second slurry which provides for further removal of said copper metal from said microelectronic substrate, wherein said first slurry has higher concentration of said abrasive than said second slurry and wherein the second slurry has less than 70% of the static etch rate of the first slurry.

31. (New) The slurry system of claim 30 wherein the second slurry has at least 20% of the static etch resistance of the first slurry.

32. (New) The method of claim 24 wherein the second slurry has less than 70% of the static etch rate of the first slurry.

33. (New) The method of claim 32 wherein the metal overburden is copper and the copper removal rate for removing the residual copper in step c) is less than 50% of the removal rate of the copper using the first slurry in step a).

34. (New) The method of claim 33 wherein the second slurry is abrasive free and the copper removal rate for removing the residual copper in step c) is less than 25% of the removal rate of the copper using the first slurry in step a).

35. (New) The method of claim 33 wherein at least one of said first and second slurries further comprise an oxidant and the copper removal rate for removing the residual copper in step c) is less than 10% of the removal rate of the copper using the first slurry in step a).

36. (New) A method for polishing a microelectronic substrate to remove a metal overburden of the microelectronic substrate, said method comprising the steps of:

(a) applying to a substrate a first slurry which comprises an abrasive for a first polishing of the metal overburden;

(b) terminating the first polishing step of (a) prior to removal of the entire metal overburden leaving residual metal overburden on the substrate; and

(c) applying to said substrate a second slurry, wherein said first slurry has higher concentration of said abrasive than said second slurry, said second slurry has a lower static etch rate than a static etch rate of the first slurry and wherein the second polishing step is performed to substantially remove only the residual metal overburden of the substrate, wherein the step of substantially removing only the residual metal overburden of the substrate is defined by leaving a trace amount of the residual metal overburden that is less than 5% of the total metal overburden whereby steps a-c) remove more than 95% of the metal overburden.